

## REMARKS

Claims 1-20 and 25 are pending and under examination, claims 21-24 having been canceled by Preliminary Amendment.

Claims 1-13 and 20 have been withdrawn herein.

Examiner requires election of one of four Groups. Examiner further requires election of one of the compounds species as listed in claim 11 or claim 25 if either of Groups II or III are elected.

Applicants have amended a typographical error on page 9, line 17 of the Specification.

Applicants have added new claims 26, 27, 28, 29, 30, 31, 32, 33, and 34.

No new subject matter has been added by any of the amendments described herein.

### Amendments to the Specification

The typographical error corrected herein does not introduce new subject matter:

“A is selected from the group consisting of N, CR<sub>1</sub>, and  $\begin{array}{c} \text{R}_{12} \\ | \\ \text{---CHN---} \end{array}$ ”

at page 9, line 17 has been amended to replace R<sub>12</sub> with R<sub>1</sub>:

“A is selected from the group consisting of N, CR<sub>1</sub>, and  $\begin{array}{c} \text{R}_1 \\ | \\ \text{---CHN---} \end{array}$ ”.

Support for amending the typographical error can be found in the original provisional application as filed- U.S. provisional patent application no. 60/541,632, filed February 4, 2004, to which the present application claims the benefit priority. The PCT application as filed, and as entered into national stage in the U.S., had inadvertently indicated on page 9, line 17 that an R group which could be a part of the “A” in one position of the carboxamide general structure was “R<sub>12</sub>” instead of “R<sub>1</sub>”, as was used in the original provisional application. That use in the provisional application can be found on page 8, line 5 of the provisional application.

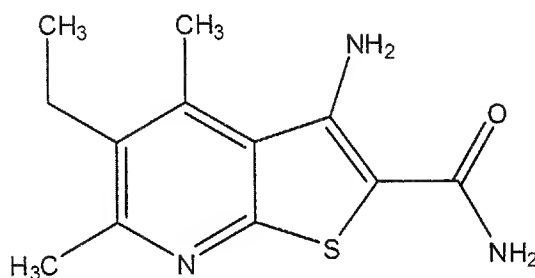
Additionally, it can be appreciated that it should have been R<sub>1</sub> in the present application because the general structures as described and defined in the present application on page 9, line 11 to page 10, line 16, only go as high as R<sub>8</sub>, not R<sub>12</sub>.

#### Group Election

Applicants hereby provisionally elect Group III (claims 14-19 and 25), drawn to methods of administering a compound or a pharmaceutical composition comprising said compound, treating subjects in need thereof, and blocking HIV replication.

#### Species Election

As to the species election requirement, because Applicants have elected Group III, Applicants hereby provisionally elect the compound with the code name 103833, with traverse, for the reasons described below. The structure of 103833 is:



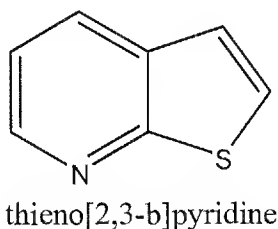
3-amino-5-ethyl-4,6-dimethylthieno[2,3-b]pyridine-2-carboxamide

#### *1. Traversal of Species Election*

Applicants respectfully submit that the compound with code name 103833, which is provisionally elected herein, shares structural and biological property similarities with specific analogs described in the specification and claimed herein (by claim amendment) such that their inclusion in a search would not be an undue burden on the Examiner and that the search of one, in the context of the present invention would necessarily find art for the others. To that end, Applicant has added claims to include the compounds similar to 103833 that were included in the specification as filed. The structures which are analogs of 103833 are provided throughout the specification as filed. For example, Figure 11 provides the structures of 103833 and 29 of its

analogs. It is these analogs that Applicants respectfully submit would require no undue burden for the Examiner to search and that when any of the 29 analogs of 103833, or 103833, or the general structure of page 9 of the specification encompassing 103833 and analogs and derivatives of 103833 are searched, that any of the other compounds will be found by the same search.

Regarding the structure, it can be seen that 103833 and the other analogs described in the specification share the base structure of thieno[2,3-b]pyridine:



This base structure is part of the general structure found at page 9, line 11 to page 10, line 15 of the Specification. The general structure is recited in claims 26 and 28. Additionally, all the structures were identified in the same assay for inhibiting HIV replication.

## *2. New Claims*

Claims 26-34 have been added to better clarify the subject matter being claimed. Applicants respectfully submit that these new claims satisfy the requirements and elections imposed by the Restriction Requirement and Species Election described above. These claims encompass the generic structure of the elected species 103833 (which was traversed above), the analogs described above, and the methods and compounds as described in the Group of elected claims. The new claims are supported throughout the claims and specification as filed.

Support for the generic structure as recited in new claims 26 and 28 is supported throughout the specification as filed, for example at page 9, line 11 to page 10, line 15. The generic structure supports the elected compound 103833, as well as the analogs which the Applicants assert should be included with 103833. Support for the analogs of 103833 is also found throughout the specification as filed, particularly in Fig. 11 where the analogs are listed.

Support for new independent claims 27 and 29, encompassing methods of contacting cells with compounds to inhibit HIV replication are described at page 9, lines 4-10, in the Examples, and in Figures 2, 3, 5, 6, 7, and 8.

Dependent claims further recite the use of 103833, its generic structure, and analogs thereof, as well as the requirement of HIV virion production being dependent upon Rev protein expression.

Applicants respectfully submit that the proposed amendments to the Specification introduce no new matter and are fully supported by the application as originally filed.

#### Conclusion

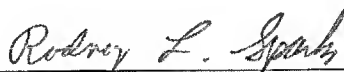
The claimed invention is believed to be patentable and applicants request passage of the application to issuance.

The Examiner is invited to contact the Applicants' attorney to discuss any matter concerning this application.

Please charge any excess fees due and credit any overpayment to Charge Account No. 50-0423.

Respectfully submitted,

July 13, 2009

  
Rodney L. Sparks, In-House Patent Counsel  
University of Virginia Patent Foundation  
250 West Main Street, Suite 300  
Charlottesville, VA 22902  
Telephone: (434) 243-6103  
Fax: (434) 924-2493